

ON HETEROCEROUS *LEPIDOPTERA* COLLECTED IN THE HAWAIIAN ISLANDS BY THE REV. T. BLACKBURN.

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The following is an account of two small series of moths forwarded by the Rev. T. Blackburn during the past year.

The entire collection represents fifteen species, of which ten are new to science; this unusual percentage of novelties is probably due to the wholly unworked localities in which most of them have been obtained.

Fortunately, in the present instance, collector's notes of considerable interest accompany the insects.

LEUCANIIDÆ.

LEUCANIA PHOTOPHILA, *n. sp.* (No. 60).

Greyish whity-brown, sericeous; primaries with seven triangular marginal black dots; an arched discal series of seven or eight epineural black dots; secondaries slightly greyer in tint than the primaries, with the outer margin irregularly white from the radial vein to the anal angle; the veins terminating in indistinct dusky dots; fringe white; abdomen whitish, tinted with yellow towards the anal extremity; under-surface of the wings sericeous white; primaries with a marginal series of six or seven black dots: body below sordid whitish; tarsi grey banded with white at the extremities of the joints. Expanse of wings, 1 inch, 5 lines.

"Occurs about Honolulu, generally flying to light in the evening, much more rarely than *L. dislocata*."—T. B.

NOCTUIDÆ.

AGROTIS SUFFUSA, W. V. (No. 55).

Oahu.

This species did not come in previous consignments, it is perfectly distinct from the insect noted in E. M. M., xiv, p. 185, which is identical with the following—

AGROTIS, *sp. n.* (No. 11).

A single example; it arrived in six or seven pieces, being apparently rotten from damp: although I have succeeded in patching it together, it is not fit to be made into a type: in marking it somewhat resembles *Spælotis*.

AGROTIS ARENIVOLANS, *n. sp.* (No. 7).

Silver-grey, shining; primaries with blackish costal margin, interrupted by three white dots towards the apex: discoidal cell smoky-brown, excepting at the base, discoidal spots smoky-brown with white border edged with black, the "orbicular" spot pyriform, the "reniform" semicircular, its front margin being also bisinuate; median vein white; a large, fusiform, black-edged, sub-median, smoky-brown patch,

attenuated towards the base; two similarly coloured patches at the base of the median interspaces, and a third on the last sub-costal interspace; two black dashes on the radial interspaces, and a third in the sub-apical furea of the sub-costal vein; an irregular smoky-brown marginal border, its inner edge zigzag; a marginal series of black spots, followed at the base of the fringe by a slender whitish line; secondaries slightly brownish, with white fringe; antennæ, crest and front of collar dark grey; centre of collar occupied by a curved white line, back of collar brownish; thorax longitudinally streaked at the sides with brownish, and with a blackish dorsal crest; abdomen brownish, clothed at the base with white hair: under-surface white; primaries sordid, the discoidal area grey; internal border opaline; a series of blackish marginal dots; secondaries with a broad silvery-greyish external border, limited internally by a sub-angulated grey stripe: discoidal cell terminating in a small black spot; palpi, tibiæ, and tarsi dusky; anal tuft pale testaceous.

Expanse of wings, 1 inch, 5—7 lines.

♂, ♀. "Island of Maui, flying by day on sandhills near the sea."—T. B.

This species belongs to the *A. jaculifera* group, its nearest ally is apparently *Agrotis munda* of Australia, but it differs very greatly even from this species, at first sight seeming more nearly to resemble Felder's "*Mamestra maori*?"

HYDROCAMPIDÆ.

OLIGOSTIGMA CURTA, *n. sp.*

Closely allied to *O. obitalis* from Australia, with which it agrees in marking, but smaller with much shorter primaries: white, the body crossed by black-edged orange belts; wings with slender black marginal line, close to which is an orange stripe; a sub-marginal black line; a black-edged orange discal belt; primaries with a second more slender stripe, the upper half of which is almost wholly orange, and widely convex, so as to cross the disc just beyond the cell; a black discocellular dot; two black oblique stripes across the basal area and parallel to the lower half of the inner discal stripe, the outer of these two varied with orange; secondaries crossed by two black lines, the outer one of which is abruptly elbowed so as to join the discal belt near the middle: under-surface paler than the upper-surface.

Expanse of wings, 6½ lines.

"Not uncommon about grassy streams in mountain valleys, when such can be found, and that is seldom."—T. B.

BOTYDIDÆ.

BOTYS ACCEPTA, Butler (No. 17).

A small example of this apparently common species.

BOTYS CONTINUATALIS (*Salbia continuatalis*, Wllgr.) (Nos. 21, 22).

"About the commonest Lepidopteron here."—T. B.

Wallengren's description of this species must have been taken from a rubbed example. I therefore append a more complete description:—

Sepia-brown, scarcely shining; wings crossed by a nearly straight, internally black-edged white stripe, slightly sinuous on the primaries, and continued inwards to a short distance along the inner margin; discocellulars black; external border greyish, an almost marginal narrow black stripe, the extreme margin also very slenderly blackish; fringe pale, white in secondaries: primaries with two more or less prominent, divergent, whitish, longitudinal streaks, the upper one just above the median vein, from the emission of its first branch to the black edge of the discal stripe, the lower one from the base to near the middle of the interno-median interspace: abdomen with white edges to the segments: under-surface pale sericeous greyish-brown, wings crossed by an inconspicuous paler stripe corresponding with the white stripe of the upper-surface: fringe of palpi white, legs sometimes white below, body occasionally whitish with pure white segmental bars; sides of palpi black.

Expanse of wings, 1 inch, 1—3 lines.

I have founded this description upon four tolerably fresh examples; one of these has the ground-colour of the primaries rather more rufous than the secondaries, but is in other respects perfectly typical: the species, as might have been supposed from Wallengren's description, is quite unlike any form of *Salbia*, and is evidently allied to *B. accepta*.

BOTYS DEMARATALIS, Walker (No. 19).

"Very local, occurs in high mountain localities, five or six miles from Honolulu."—T. B.

BOTYS LOCALIS, *n. sp.* (No. 61).

Greyish-fuliginous, irrorated with black scales: wings with whitish external border and fringe, extreme margin and a submarginal series of almost confluent dots, black; primaries with a black dot in the cell, and slightly concave discocellular line; two slightly wavy blackish lines from the median vein to the inner margin; a diffused, arched, dark, discal streak; secondaries with an oblique, dark brown discocellular line; an undulated and sub-angulated, dark brown discal line, bounded externally by a pale diffused belt: posterior edges of the abdominal segments pale, but not white; under-surface altogether paler, palpi with white fringe, tibiae and tarsi whitish; the discal line of secondaries not bounded by a pale belt as on the upper-surface.

Expanse of wings, $9\frac{1}{2}$ lines.

"A very local species; Oahu."—T. B.

MECYNA EXIGUA, *n. sp.* (No. 62).

Primaries white, densely irrorated with black; two ill-defined, white-edged, black basal spots; a trisinuated, white-edged, oblique black line just before the middle; a second zig-zag, white-edged, black line limiting the external border, which is blackish, crossed by a sub-marginal series of white-bordered black dots; outer margin grey; a marginal series of black dots; fringe grey, traversed by a dusky line; secondaries ochreous, with a broad, binsinuated, external, black-brown border, which emits a streak along the median vein to the base; external half of abdominal border also blackish; fringe ochreous, tipped with blackish: head and thorax white,

flecked with grey; abdomen pale sordid ochreous: primaries below shining leaden-grey; the costal margin, internal border, and base of fringe white; secondaries pale stramineous; apex irrorated with grey; three apical, marginal, angular, blackish liture; fringe at apex tipped with grey: body below white, palpi grey.

Expanse of wings, $8\frac{1}{2}$ lines.

“Flies by day over flowers in hot sunshine; Maui.”—T. B.

Allied to *M. ornithopteralis*, but with considerably shorter palpi, and altogether much smaller.

LARENTIIDÆ.

LARENTIA INSULARIS, n. sp. (No. 63).

Primaries silvery-white, densely irrorated with sooty-black, the base and a broad irregular oblique belt of the usual form sooty-black, traversed by numerous parallel, zig-zag jet-black lines; discocellulars jet-black; a costal sub-apical sooty-black spot, bounded externally by an undulated white line; a regularly sinuated sub-marginal blackish line, alternately spotted with black and white (the white spots being placed upon the veins, and the black spots between them); a marginal series of jet-black spots in pairs; fringe grey, traversed by a blackish line; secondaries silver-grey, with a feeble pearly lustre; a central, irregular, slightly darker but indistinct belt; marginal black spots and fringe as in primaries: body grey, flecked with black; posterior margins of the abdominal segments spotted with black and edged with white: under-surface silver-grey, wings with slightly darker basal area and broad central belt traversed by wavy pale lines; discocellular spots black.

Expanse of wings, 1 inch, 5 lines.

Seems to come nearest to *L. Kollariaria*, but, excepting in structure, more nearly resembles *Petrophora prunata* var. *nubilata* of Packard's Geometrites: the species, according to the Rev. T. Blackburn, “occurs sparingly on Haleakala, elevation 900—1000 feet.”

“I succeeded in capturing only two specimens; and expense, labour, and time involved in visiting the locality are so great, as to render a repetition of my visit improbable.”—T. B.

PSEUDOCOREMIA PALUDICOLA, n. sp. (No. 58).

♂. Primaries above varying from golden-brown to shining fuliginous, speckled with black, crossed almost in the middle by an irregular dusky belt, the inner margin of which is bisinuated, and the outer margin multisinuate and sub-angulated, both margins marked upon the veins by black dots; reniform spot well marked, blackish; indications of a dusky line limiting the external area; a marginal series of black spots: secondaries pale pinky-brown, frequently with a central undulated series of blackish spots: body coloured in correspondence with the wings: under-surface pale shining sandy-brown, with the internal areas of the wings (particularly the primaries) more or less suffused with silvery-grey; the whole surface irrorated with black or grey; the discocellular, and a more or less extended discal series of spots, black.

Expanse of wings, 1 inch, 1—2 lines.

♀. Larger, the wings more elongated, the ground colour of the primaries lighter or darker fuliginous; the central belt indistinct: otherwise as in the male.

Expanse of wings, 1 inch, 4— $5\frac{1}{2}$ lines.

“The dark form is the ordinary one. I bred a lot from pupæ, so know the lighter form (of which I got three) is pretty certain a

variety. It is very local, occurring here and there in profusion in marshy spots high up the mountains."—T. B.

SCOTOSIA RARA, *n. sp.* (No. 59).

Primaries above dark fuliginous-brown, flecked with black; limits of the central belt indicated by two irregularly undulated transverse black lines; reniform spot distinct, black-edged; a sinuous sub-marginal pale line limited internally by a diffused blackish stripe, and bounding the external area; a marginal series of black spots, enclosing whitish dots; fringe blackish; secondaries sericeous greyish-brown, traversed by a series of blackish dots beyond the cell: body coloured to correspond with the wings: primaries below greyish, flecked with blackish, costa sandy-yellowish flecked with black; discocellulars dusky; a discal series of blackish spots, becoming quite black towards the costa; a marginal series of black spots; secondaries whitish, speckled with blackish; a dusky triangular discocellular spot; a bisinuated discal series of black spots; a marginal series of black spots; fringe grey: body below sordid white, legs marbled with black. Expanse of wings, 1 inch, 10 lines.

Although the example is not in good condition, I have described it, as Mr. Blackburn tells me that it was obtained at a place which he may never visit again, and seems to be both rare and local. "It occurred upwards of 4000 feet above sea level, on Haleakala (an extinct volcano); island Maui." The male, which Mr. Blackburn retains, has strongly pectinated antennæ. This *Scotosia* is most nearly allied to *S. dubitata*.

PHYCIDÆ.

PLODIA INTERPUNCTALIS, *Hübner* (No. 23).

Mr. Blackburn remarks of this species, "Apparently a *Phycis*; very likely not indigenous, I have not found it commonly."

TINEIDÆ.

SCARDIA LIGNIVORA, *n. sp.* (No. 56).

♂. Ground colour of primaries sericeous whitish, irrorated with blackish scales; costa crossed close to the base by a black spot; an oblique brown bordered black dash from the sub-costal nervure to the inner margin, followed by two or three black dots; remainder of the wing occupied by three alternate triangles margined and intersected by a W-shaped white line; the first and third areas (bounded by the white line) blackish, the second area enclosing two brown spots; three elongated impressed black spots bounding the outer edge of the white line near apex; fringe white; secondaries silvery, slightly brownish towards apex; fringe whity-brown: thorax whity-brown, flecked with darker scales, head whitish; abdomen grey, with whitish edges to the segments: under-surface metallic-silver, without markings.

Expanse of wings, 10½ lines.

♀. Larger than the male, the ground colour of primaries pinky, the dark areas less distinct, washed with laky-brown, the first triangular area interrupted by a longitudinal black discoidal dash, which is broken near its inner extremity by a whitish spot; secondaries greyer, abdomen ochraceous both above and below, wings below of a greyer silvery-colour.

Expanse of wings, 1 inch.

"Bred from larvæ feeding on very rotten wood, in mountain forests; Oahu."—T. B.

This species is very distinct from any *Scardia* hitherto recorded.